§ 111.60–4 Minimum cable conductor size.

Each cable conductor must be #18 AWG (0.82 mm^2) or larger except—

(a) Each power and lighting cable conductor must be #14 AWG (2.10 mm^2) or larger; and

(b) Each thermocouple, pyrometer, or instrumentation cable conductor must be #22 AWG (0.33 mm^2) or larger.

[CGD 94–108, 61 FR 28280, June 4, 1996]

§ 111.60–5 Cable installation.

(a) Each cable installation must meet—

(1) Sections 20 and 22, except 20.11, of IEEE Std 45; or

(2) IEC 92–3 and paragraph 8 of IEC 92–352.

(b) Each cable installation made in accordance with paragraph 8 of IEC 92–352 must utilize the conductor ampacity values of Table I of IEC 92–352.

(c) Cable must not be located in any tanks except to supply equipment or instrumentation specially designed for and compatible with such location and whose function require its installation in the tank. The cable must be compatible with the liquid or gas in the tank or be protected by an enclosure.

(d) Braided cable armor or cable metallic sheath must not be used as the grounding conductor.

[CGD 74–125A, 47 FR 15236, Apr. 8, 1982, as amended by CGD 94–108, 61 FR 28280, June 4, 1996]

§ 111.60–6 Fiber optic cable.

Each fiber optic cable must—

(a) Be constructed to pass the flammability test contained in IEEE Std 45, IEEE Std 1202, ANSI/UL 1581 test VW–1, or IEC 332–3 Category A; or

(b) Be installed in accordance with § 111.60–2.

[CGD 94–108, 61 FR 28280, June 4, 1996]

§ 111.60–7 Demand loads.

Generator, feeder, and bus-tie cables must be selected on the basis of a computed load of not less than the demand load given in Table 111.60–7.

TABLE 111.60–7—DEMAND LOADS

Type of circuit	Demand load
Generator cables	115 percent of continuous generator rating.
Switchboard bus-tie, except ship's service to emergency switchboard bus-tie.	75 percent of generating capacity of the larger switchboard.
Emergency switchboard bus-tie	115 percent of continuous rating of emergency generator.
Motor feeders	Article 430, National Electrical Code.
Galley equipment feeder	100 percent of either the first 50 KW or one-half the connected load, whichever is the larger, plus 65 percent of the remaining connected load, plus 50 percent of the rating of the spare switches or circuit breakers on the distribution panel.
Lighting feeder	100 percent of the connected load plus the average active circuit load for the spare switches or circuit breakers on the distribution panels.
Grounded neutral of a dual voltage feeder	100 percent of the capacity of the ungrounded conductors when grounded netural is not protected by a circuit breaker overcurrent trip, or not less than 50 percent of the capacity of the ungrounded conductors when the grounded neutral is protected by a circuit breaker overcurrent trip or overcurrent alarm.

§ 111.60–9 Segregation of vital circuits.

(a) *General.* A branch circuit that supplies equipment vital to the propulsion, control, or safety of the vessel must not supply any other equipment.

(b) *Passenger vessels.* (1) Each passenger vessel with firescreen bulkheads that form main fire zones must have distribution systems arranged so that fire in a main fire zone does not interfere with essential services in another main fire zone.

(2) Main and emergency feeders passing through a main fire zone must be separated vertically and horizontally as much as practicable.

§ 111.60–11 Wire.

(a) Wire must be in an enclosure.

(b) Wire must be component insulated.

(c) Wire, other than in switchboards, must meet the requirements in sections 19.6.4 and 19.8 of IEEE Std 45;